

**REMARKS**

Claims 1-19 are all the claims pending in the application. Claim 2 has been rewritten in independent form. Based on page 10 of the Office Action, it appears that claim 2 was indicated as being allowable if rewritten in independent form.

Entry of the above amendment is respectfully requested.

Claims 1, 3 and 6-10 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Jones et al. (US 4,767,823) in view of Yasugata (JP 05-009332).

In addition, claims 1, 3, and 10 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Aystetten et al. (US 3,856,766) in view of Yasugata (JP 05-009332).

Further, claims 1, 3, and 5 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Riff (US 4,593,075) in view of Yasugata (JP 05-009332).

Moreover, claims 1, 3-5, and 8 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Benedikt et al. (US 4,473,451) in view of Yasugata (JP 05-009332).

The rejections are respectfully traversed.

Claim 1 is directed to a process for the production of a chlorinated polyolefin comprising a step of melting and kneading a polyolefin and then molding it to obtain a solid, a step of pulverizing the solid into powder having a mean particle size of no greater than 500  $\mu\text{m}$ , and a step of chlorinating the powder.

According to the process of the present invention, production of uniform chlorinated polyolefins, which can decrease the non-uniformity in a chlorinated polyolefin product based on the employed starting polyolefin powder (such as difference in molecular weight or density between the polyolefin particles or variation in each particle), is obtained. In order to obtain

uniform chlorinated polyolefin, the starting polyolefin is melted and kneaded so that the variations between the particles and in each particle are dissolved, a molded solid body of the resulting uniform polyolefin is pulverized into powder of a mean particle size of no greater than 500  $\mu\text{m}$ , and then the obtained powder is chlorinated.

The Examiner recognizes that none of the primary references, Jones, Aystetten, Rifi and Benedikt, disclose a melting and kneading step or molding step of claim 1. Thus, to make up for the deficiencies of the cited references, Yasugata is cited as disclosing a process of forming a film by kneading and melting a mixture of polyethylene and molding the mixture into the sheet-like shape (i.e., solid). *See Abstract.* The Examiner asserts that it would have been obvious to one of ordinary skill in the art to adapt the step of Yasugata because the particle properties can be tailored, thereby obtaining the present invention.

Applicants respectfully disagree.

A *prima facie* showing of obviousness requires (1) a suggestion or motivation in the references or in the knowledge of one of ordinary skill in the art, to modify the references or to combine reference teachings; (2) a reasonable expectation of success; and (3) a teaching or suggestion of all claimed limitations. That is, to support an obviousness rejection, there must be some *teaching or suggestion* in the prior art for one skilled in the art to arrive at the claimed invention.

The object of Yasugata is to obtain a microporous film of polyethylene. Therefore, there is no intent at all in Yasugata that the obtained microporous film be pulverized into powder. Indeed, there is no teaching or suggestion that the microporous film is pulverized in Yasugata. Thus, Yasugata does not teach or suggest the pulverization of a polyolefin solid body before

**AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Application No. 10/528,054**

**Attorney Docket Q72079**

chlorination. Accordingly, one of ordinary skill in the art would not be motivated to modify the process of Jones, Aystetten, Rifi or Benedikt, in which powders are used, based on the disclosure of Yasugata, which does not relate to powders, particularly since Yasugata does not teach or suggest pulverizing the microporous film.

For at least the above reasons, it is respectfully submitted that claims 1 and 3-10 are patentable over the cited art.

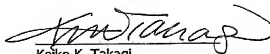
Accordingly, withdrawal of the rejections is respectfully requested.

In view of the above, reconsideration and allowance of claims 1-10 is respectfully requested.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Keiko K. Takagi  
Registration No. 47,121

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

Date: April 16, 2007